

SECTION 10.5

Comments and Responses for Tribes

10.5 Comments and Responses for Tribes

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**Re: Imperial Irrigation District Water Conservation and Transfer Project Draft
Environmental Impact Report/Environmental Impact Statement and Draft
Habitat Conservation Plan**

Dear Mr. Ellis and Mr. Grubaugh:

Please accept the following comments on the Draft Program Environmental Impact Report/Environmental Impact Statement ("DEIR/EIS") for the Imperial Irrigation District ("IID") Water Conservation and Transfer Project ("Project") Draft Habitat Conservation Plan ("DHCP"). These comments are submitted on behalf of the Torres Martinez Desert Cahuilla Indians ("Tribe"). The Tribe owns and enjoys the full use and benefit of the Torres Martinez Reservation ("Reservation"), which was reserved as the Tribe's permanent homeland. The Reservation is located on the northwest side of the Salton Sea and includes nearly 12,000 acres of land that has been inundated by inflows of Colorado River water into the Salton Sea.

The implementation of the IID Project will have direct impacts on the fish, wildlife, land, water, and cultural assets of the Tribe, none of which are properly considered by the DEIR/EIS or the DHCP. This failure to adequately consider the impacts of the Project on Tribal assets or to provide adequate mitigation measures for foreseeable impacts

**Letter - T1. Torres Martinez Desert Cahuilla Indians.
Signatory - Les W. Ramirez.**

Response to Comment T1-1

Your comments are noted. Please refer to individual comment responses below for the specific comments in your letter.

T1-1

constitutes a violation by the Bureau of Reclamation of the trust obligation that the United States owes to the Tribe.

While the Tribe recognizes that the federal government must assist in the effort to reduce California's Colorado River water consumption to 4.4 million acre-feet per year, the United States cannot sacrifice Tribal trust resources in the process. Federal agencies must fulfill their trust obligations while conducting any action that impacts trust assets. The federal courts have repeatedly recognized this obligation of the United States to protect trust resources, including the preservation of water for tribal fisheries (*Pyramid Lake Paiute Tribe v. Morton*, 354 F. Supp. 252 (D.D.C. 1972)) and the preservation of wildlife resources (*Northern Arapaho Tribe v. Hodel*, 808 F.2d 741 (10th Cir. 1987)).

In regard to the Endangered Species Act, the federal Court of Appeals for the 9th Circuit has held that even when the federal government satisfies the requirements of the Endangered Species Act, it may fail to fulfill its trust obligation to protect tribal resources. (*Pyramid Lake Paiute Tribe v. U.S. Dept. of Navy*, 898 F.2d 1410 (1990)). While the above cases relate to tribes whose trust assets were established by treaties, the 9th Circuit has also recognized that, for the purpose of protecting on-reservation tribal rights, including fishing rights, there is no difference between reservations created by treaty or by executive order, such as the Tribe's Reservation. (*Parravano v. Babbitt*, 70 F.3d 539 (1995)). The U.S. Supreme Court has also recognized that the nullification of tribal hunting and fishing rights that are based on statute, as are the Tribe's, gives rise to a claim for compensation. (*Shoshone Tribe v. U.S.*, 299 U.S. 476 (1937)).

The DEIR/EIS and the DHCP fail to provide adequate information for either the Tribe or its federal trustee agencies to make informed decisions regarding the implementation of the Project or the DHCP. Of greatest concern is the lack of true consideration of impacts to Tribal trust assets due to the indecision of what mitigation methods will be utilized and the use of faulty assumptions in the development of the environmental baseline. These assumptions, which greatly exaggerate the rate of deterioration of the water quantity and quality of the Salton Sea under current No Project conditions, obscure critical concerns and under-calculate the real environmental impacts of the Project. The adoption of this flawed baseline would allow the action agencies to create a final EIR/EIS and HCP that would avoid addressing critical issues and would fail to provide meaningful options to avoid or properly mitigate the environmental impacts of the Project. Therefore, the acceptance of the DEIR/EIS by the Bureau of Reclamation in its current form or the approval of the DHCP by the Fish and Wildlife Service would constitute a breach of the United State's fiduciary duty to protect the trust assets of the Tribe.

Trust Assets

The DEIR/EIS acknowledges that preliminary inquiries were made by representatives of Indian tribes and the Bureau of Indian Affairs regarding the potential for impacts to the Salton Sea and Indian trust assets, such as Indian water rights. (ES-15). Given this forewarning it is surprising that the DIER/EIS fails to adequately accommodate these

Response to Comment T1-2

As described in the response to comment T1-4, the Draft EIR/EIS has been revised to provide additional information on the impacts to trust assets and proposed mitigation. These changes are indicated in this Final EIR/EIS in Section 3.9.

Response to Comment T1-3

Refer to the Master Response on *Hydrology—Development of the Baseline* in Section 9 of this Final EIR/EIS. For tribal asset issues, refer to the revised Indian Trust Assets section (Section 3.9 of this Final EIR/EIS).

Response to Comment T1-4

The tribe's water rights have not been adjudicated or quantified. It is beyond the scope of the EIR/EIS to speculate about the outcome of future water rights determinations. The Draft EIR/EIS has been revised to include a better description of potential impacts to the groundwater resources utilized by the tribe, and of proposed mitigation of those impacts. This change is indicated in this Final EIR/EIS in Section 3.9.

T1-4

concerns. In its current form, the DEIR/EIS contains no meaningful discussion of impacts to Tribal water rights.

T1-5

The DEIR/EIS itself recognizes that the Summary of Indian Trust Assets Impacts is incomplete as the determinations of the potential impacts from the DHCP biological conservation measures have not yet been completed by the Fish and Wildlife Service. (3.9-2, fn1). This admission alone indicates a knowing breach of the federal trust obligation, and, concurrently, is a failure to adequately analyze impacts to Indian Trust Assets. The Fish and Wildlife Service is not the source of this breach (unless it approves the current DHCP), the breach is perpetuated by the Bureau of Reclamation, which has failed to provide a commitment to well-defined conservation measures within the DHCP.

T1-6

The DEIR/EIS fails to provide an adequate analysis of the Project's potential environmental impacts to the Salton Sea, leaving the Tribe in a state of uncertainty about the future of the Sea, one of its most precious natural resources. The DEIR/EIS begins by utilizing a delineation of the area covered by the DHCP that is improperly narrow. The DHCP includes the Salton Sea and a mere 0.5 feet around the Sea within its scope, but does not include any of the shoreline or adjacent areas to the north, northwest or east of the Salton Sea that will undoubtedly be impacted by the issues that are contemplated in the DEIR/EIS and DHCP, including massive fish and bird mortality, air quality degradation, and deposition of contaminants by the lowering of the Sea elevation. Nor does the DHCP include any description of the Salton Sea itself in its account of the location, regional setting, or physical environment of the DHCP area. (2-1 to 2-13).

T1-7

While the DEIR/EIS does recognize that the forecasted lower elevation of the Salton Sea will impact the trust assets of the Tribe, it naively identifies only vandalism and erosion as possible negative effects. Alternatively, the DEIR/EIS states that the lowering of the Salton Sea may provide the Tribe with opportunities for exploitation of natural resources. (ES-34). This analysis ignores the existence of flowage easements over the inundated portions of the Torres-Martinez Indian Reservation held by CVWD and IID that would severely limit the purported economic development opportunities available to the Tribe. In addition, even if the Tribe could access some resources that are currently inundated by the Salton Sea after the Sea recedes, the negative impact to the Trust resources that the Sea currently supports far outweigh the nominal benefits that may be derived from any currently submerged resources. Thus the analysis within the DEIR/EIS is contradictory in light of the action agencies' own recognition of Tribal concerns that newly exposed shoreline soils may be severely contaminated by salts, DDT, and other contaminants. (3.9-6). In spite of the awareness of these concerns, the DEIR/EIS takes the inappropriate approach of not considering these impacts, merely because the soils have not yet been tested. (See also the discussion below regarding air quality impacts of contaminated soils).

T1-8

Mitigation

The DHCP does not currently achieve the standards established in §§10(a)(2)(B)(ii) and (iv) of the Endangered Species Act, that incidental take permitted by the Secretary of the Interior, "will not appreciably reduce the likelihood of the survival and recovery of

Response to Comment T1-5

HCP Approach 1 has been eliminated from further consideration in the Final EIR/EIS. Refer to the Master Response on *Biology—Approach to Salton Sea Habitat Conservation Strategy* in Section 9 of this Final EIR/EIS. Also, refer to the Master Response on *Biology—Timing of Implementation of Biological Mitigation Measures* in Section 9 of this Final EIR/EIS.

Response to Comment T1-6

The description of the HCP area in the HCP (Section 1.4) does not specify that only the area within 0.5 foot of the Sea is included in the HCP area. Further, the HCP addresses impacts to covered species using the Salton Sea and adjacent areas that could be influenced by reductions in the surface water elevation of the Sea. For example, Salton Sea - 3 of the Salton Sea Habitat Conservation Strategy addresses potential changes in all of "adjacent wetland" areas dominated by tamarisk scrub regardless of its location. As part of the existing conditions, the Salton Sea is described in Section 2.3.2.4 of the HCP.

Response to Comment T1-7

The Draft EIR/EIS has been revised to address this comment. These changes are indicated in this Final EIR/EIS in Section 3.9.

A number of historical studies have been conducted to assess the chemical quality of sediments underlying the Salton Sea. Most of the studies have been limited in spatial extent to locations of particular interest or concern and often to specific constituents of concern. However, one 1999 study involved a widespread reconnaissance investigation of Salton Sea sediments, and sediment samples were analyzed for a suite of organic and inorganic constituents.

The results of these studies represent a starting point for assessing the potential human health and/or ecological impacts of the exposure of Salton Sea sediments that would occur if the level of the Salton Sea recedes in the future. However, human and ecological risk is a combination of the presence of constituents of concern and the pathway or exposure, as discussed in the Master Response on

Response to Comment T1-7 (continued)

Air Quality—Health Effects Associated with Dust Emissions.

Widespread Survey of Salton Sea Sediments

LFR Levine-Fricke (1999) conducted sediment samples in two phases from bottom sediments across the entire Salton Sea. A total of 57 grab samples (0 - 15 cm) and 16 core samples (0 - 180 cm depth in 30-cm increments) were collected in both phases and analyzed for a range of inorganic and organic chemicals of interest.

Inorganic chemicals were identified by the authors as being of "potential ecological concern" if concentrations were found to be in excess of a maximum baseline concentration for soils in the western U.S. The inorganic constituents found to be of potential ecological concern were:

- Cadmium
- Copper
- Molybdenum
- Nickel
- Zinc
- Selenium

The concentrations of these elements were compared to reference values for potential effects of concentrations on organisms living in submerged sediments where these concentrations exist. The primary reference values used by the authors for comparison of these sediment concentrations are National Oceanic and Atmospheric Administration (NOAA) biological effects range low (ERL) and effects range medium (ERM). ERMs are concentrations at which 50% of the studies for a particular chemical showed biological effects, and ERLs are the concentrations at which 10% of the studies showed biological effects. ERLs are generally interpreted to be "rarely" associated with adverse ecological effects. However, no ERL or ERM values are reported for selenium or molybdenum, so alternative references were chosen for these. For selenium, the reference value selected is sediment concentrations recommended by the San Francisco Regional Water Quality Control Board as suitable for use in cover (0.7 mg/kg) and non-cover (1.4 mg/kg) sediment in created wetlands. For molybdenum, the maximum baseline value for western soils (4.0 mg/kg) was used for comparison. Reported ranges of concentrations of these inorganic elements of concern are summarized in Tables 1 and 2.

Note that these reference values, except for the western soils baseline value, are associated with potential effects of concentrations on organisms living in submerged sediments.

For potential human effects comparison, additional reference values, the EPA Preliminary Remediation Goals (PRGs), are reported in Tables 1 and 2. The PRGs combine current EPA toxicity values with "standard" exposure factors to estimate contaminant concentrations in environmental media (soil, air, water) that are considered protective of humans, including sensitive groups, over a lifetime (EPA, 2000). Exceeding a PRG suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate. The PRGs reported here represent standard exposure factors and do not necessarily reflect site-specific risk due to unique circumstances. The PRGs reported here are for residential and industrial soil settings.

The inorganic constituent identified by the LFR Levine-Fricke study as being of highest potential concern was selenium. Most selenium concentrations measured were in the range of 0 - 2 mg/kg, but 10 out of 73 samples were above 2 mg/kg, with a maximum of 8.5 mg/kg. The highest selenium concentrations were found in the northern two-thirds of the lake.

Another potential chemical of concern detected in the lakebed sediments is arsenic. The LFR Levine-Fricke study did not find elevated levels of arsenic in the Salton Sea sediments relative to the maximum baseline concentration for soils in the western U.S., and therefore, it was not characterized by the study as being of potential ecological concern. In fact, as shown in Tables 1 and 2, the background level of arsenic in the some western U.S. soils already exceeds EPA's Preliminary Remediation Goal (PRG) for arsenic in residential soil.

Levels of a range of organic constituents were also measured as part of the study, but generally low and narrow ranges of concentrations were measured (see Table 3).

Focused Sediment Sampling in Alamo River Delta Area of Salton Sea

Setmire et al. (1993) conducted sampling of bottom sediments in a small area in the southeast portion of the Salton Sea near where the Alamo River enters the Sea. Sediment samples

Response to Comment T1-7 (continued)

were collected at 16 sites. Selenium concentrations in these sediments ranged from 0.2 mg/kg to 2.5 mg/kg.

Other Sediment Concentration Reports

A number of other more limited studies have collected and analyzed Salton Sea sediment samples. These sampling efforts were mostly targeted to specific locations where problems due to local conditions were expected to exist. Specific examples include offshore of the U.S. Navy's Salton Sea Test Base, where non-explosive test ordnance has been dropped into the sea, and the outlets of major tributaries such as the Alamo and New Rivers. In these areas, elevated concentrations of specific organic and inorganic constituents associated with specific activities or land uses in these areas have been found.

Tables 1 and 2

Inorganic Constituent Concentration Summary

Concentrations shown are ranges reported by LFR Levine-Fricke (1999), in a sea-wide survey of Salton Sea bottom sediments.

Salton Sea Sediments

Constituent	Reported Concentration (mg/kg or ppm)			
	High	Mean	ERL ¹	ERM ¹
Cadmium	5.8	2.35	1.2	9.6
Copper	53	13.98	34	270
Molybdenum	194	25.70		
Nickel	33	17.14	20.9	51.6
Zinc	190	39.88	150	410
Selenium	8.5	1.30		
Arsenic	7.1	3.10		
Arsenic	7.1	0.00		

Constituent	Various Reference Concentrations (mg/kg or ppm)				
	Wetlands Cover Soil Suit ²	Wetlands Noncover Soil Suit ²	Western Soils Maximum Baseline ³	EPA PRG Residenti al Soil ⁴	EPA PRG Industrial Soil ⁴
Cadmium				37	810
Copper			90	2,900	76,000
Molybdenum			4	390	10,000
Nickel			66	1,600	41,000
Zinc			180	23,000	100,000
Selenium	0.7	1.4	1.4	390	10,000
Arsenic				22 ^{nc}	440 ^{nc}
Arsenic				0.39 ^{ca}	2.7 ^{ca}

Notes:

¹ NOAA Biological Effects Range Low (ERL) and Biological Effects Range Medium (ERM) are guidelines used to evaluate whether submerged sediment chemical concentrations are

Response to Comment T1-7 (continued)

within ranges that have been reported to be associated with biological effects. ERM - concentration at which 50% of studies for a particular chemical showed biological effects in biota living in submerged sediments. ERL - are the concentrations at which 10% of the studies showed biological effects.

² Regional Water Quality Control Board, San Francisco Region guidelines for sediment suitable for cover (low value) or noncover (higher value) sediment in wetlands creation.

³ Maximum "baseline value" for soils of the Western United States based on analysis of samples of 733 samples of undisturbed soils from throughout the Western U.S. by Shacklette and Boerngen (1984), *Element Concentrations in soils and other surficial materials of the conterminous United States: U.S. Geological Survey Professional Paper 1270*, 105 pp.

⁴ EPA Preliminary Remediation Goals (PRGs) combine current EPA toxicity values with "standard" exposure factors to estimate contaminant concentrations in environmental media (soil, air, water) that are considered protective of humans, including sensitive groups, over a lifetime. Exceeding a PRG suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate. The PRGs reported here represent standard exposure factors and do not necessarily reflect site-specific risk due to unique circumstances.

^{nc} Non-cancer risk PRG equate to a hazard quotient of 1 for noncarcinogenic concerns.

^{ca} Cancer risk PRG equates to a one-in-a-million cancer risk. According to the EPA PRG documentation, naturally occurring arsenic in soils are frequently higher than the cancer risk-based PRG. Because of this EPA Region 9 has at times used the non-cancer PRG to evaluate sites, recognizing that this value tends to be above background levels yet still falls within the range of soil concentrations that equates to EPA's "acceptable" cancer risk of $10E^{-6}$ to $10E^{-4}$.

Table 3. Organic Constituent Concentration Summary

Concentrations shown are ranges reported by LFR Levine-Fricke (1999), in a sea-wide survey of Salton Sea bottom sediments.

Detected Constituent	Reference Concentrations				
	Maximum Detection Limit (µg/kg dry weight)*	Number of Sites with Detects (from 73 sites)	Highest Reported Concentration (µg/kg dry weight)	EPA PRG Residential Soil	EPA PRG Industrial Soil
1,2,4 Trimethylbenzene	77	1	700	54,000	170,000
1,3,5-Trimethylbenzene	77	2	230	21,000	70,000
2-Butanone	77	51	536	NA	NA
Acetone	95	6	1,526	1,600,000	6,200,000
Benzene	77	1	43	650	1,500
Carbon Disulfide	16	69	5,000	360,000	720,000
n-Propylbenzene	77	1	77	140,000	240,000
Naphthalene	77	1	110	56,000	190,000
o-Xylene	77	1	45	210,000	210,000

Note:

* Detection limits vary according to test methods and presence of interference. Retesting with lower detection limits was conducted for some samples.

(**Note:** In addition to the sediment information summary presented here, also refer to the Master Responses on *Air Quality—Health Effects Associated with Dust Emissions* and on *Air Quality—Salton Sea Air Quality Monitoring and Mitigation Plan* in Section 9 of this Final EIR/EIS for more information on plans to evaluate and mitigate for potential health effects associated with exposed sediments. See also the EPA website factsheet on Selenium [EPA 2002].)

Letter - T1
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the species in the wild," and that, "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking." The Project will clearly reduce the probable survival rates of listed piscivorous bird species by dramatically accelerating the mortality of fish populations in the Salton Sea. Furthermore, the DHCP fails to set forth a decisive, reliable mitigation strategy. These failings of the DHCP are of immense concern as the DHCP, if approved in its current form, will provide regulatory assurance to IID that additional or meaningful mitigation measures will not be required to address impacts to the covered species, putting at risk the covered species' ability to recover in the wild.

The indecision manifest in the DHCP regarding which of two very different proposed approaches IID may eventually utilize to mitigate impacts to covered species at the Salton Sea makes any informed evaluation or decision-making impossible, whether by the Tribe or the federal trustee agencies.

Approach 1 provides for the construction of a fish hatchery to stock fish into the Salton Sea until the salinity level of the Sea reaches intolerable levels. At that point, IID would construct 5,000 acres of fishponds at the south end of the Salton Sea. It is hoped, although by no means conclusively established, that these fishponds would be utilized and would adequately support covered populations of piscivorous birds. The DHCP does not define the saline tolerance level and chooses the most saline tolerant non-native species as its indicator of saline tolerance. This ambiguity of the saline tolerance level leaves the date of pond construction an open question. In addition, the design and potential locations of the fishponds are not described with sufficient detail to allow for any analysis of their potential viability as a meaningful mitigation measure. For example, there is no discussion of why the ponds, which will apparently be filled with canal water (3-25), will not suffer the same water quality woes as the Salton Sea; or, how shorebirds, such as the snowy plover, will utilize 5-foot deep ponds as reproductive habitat. Therefore, under the DHCP as currently written, IID can wait until all but a few fish in the Salton Sea are killed off before breaking ground on the fishponds, which will likely prove to be ineffective.

Amazingly, the DHCP concludes that no impacts to Tribal assets would occur from this rearrangement of the biological structure of the Salton Sea ecosystem. This mitigation approach is based on the occurrence of a die-off of all fish in the Salton, followed by a relocation of all piscivorous bird to the southern end of the Salton Sea. To the contrary, the impacts to the recreation opportunities accessed from the Reservation, such as fishing and bird watching, would be devastating. The DHCP's approach contradicts the assertion that the Tribe will potentially enjoy increased economic benefits, which is utilized by the DHCP/EIS itself to determine that there will be no adverse impacts to the Tribe's trust assets. (3.9-6)

Approach 2 contemplates the use of conserved water to compensate for the reduced inflows that will be caused by the Project. This alternative proposes to maintain the level of the Salton Sea at its current baseline (Tribal concerns regarding the inaccuracy of the environmental baseline are discussed in detail herein). To do so, it is asserted that IID

Response to Comment T1-8

Please refer to the Master Response on *Biology—Approach to the Salton Sea Habitat Conservation Strategy* in Section 9 in this Final EIR/EIS.

Response to Comment T1-9

Please refer to the Master Response on *Biology—Approach to the Salton Sea Habitat Conservation Strategy* in Section 9 in this Final EIR/EIS.

Response to Comment T1-10

Please refer to the Master Response on *Biology—Approach to the Salton Sea Habitat Conservation Strategy* in Section 9 in this Final EIR/EIS.

Response to Comment T1-11

The Draft EIR/EIS has been revised to include additional information on the Tribe's concerns about impacts to fish and wildlife resources. These changes are indicated in this Final EIR/EIS in Section 3.9. The proposed HCP Approach 2 (now referred to as Salton Sea Habitat Conservation Strategy) would fully mitigate impacts to sport fish and related recreation. Also, please refer to the Master Response on *Recreation—Mitigation for Salton Sea Sport Fishery* in Section 9 of this Final EIR/EIS.

Response to Comment T1-12

The approach to addressing Salton Sea impacts has been revised to avoid impacts through the use of additional water to offset reductions in inflow to the Sea resulting from water conservation and transfer (see the Master Response on *Biology—Approach to Salton Sea Habitat Conservation Strategy* in Section 9 in this Final EIR/EIS). This revised approach does not preclude the use of water from other sources.

would conserve additional water, above and beyond the water conserved for transfer, and allow this water to flow to the Salton Sea. Not only has IID not defined how or where it will be able to conserve water for the purposes of the contemplated water transfers, but it also fails to recognize that the use of conserved water for Salton Sea restoration is a concept that has already been rejected by its own Board of Directors and numerous other local communities. Inclusion of this mitigation approach, without additional commitment by IID to implement it or requirements for IID to do so, is specious and casts a shadow of invalidity on the rest of the analysis provided in the DEIR/EIS and DHCP.

The DHCP states that it does not consider mitigation alternatives set forth by the Pacific Institute or the Tri-Delta Wetland Project because of, "a lack of detail required to determine feasibility and address agency concerns." (3-26). However, the agency concerns are not set forth nor is the nature of the missing details explained. This lack of consideration predicated on a lack of detail is astonishing considering that the DEIR/EIS and the DHCP do not hesitate to rely on a tenuous model of predicted baselines, mitigation approaches that have yet to be determined and are likely to be unfeasible, and conservation strategies that have yet to be developed or defined.

Just one example of the DHCP's own, "lack of detail required to determine feasibility and address agency concerns," is the approach set forth for pupfish conservation. The DHCP states that IID will ensure an appropriate level of conductivity between pupfish populations within individual drains. It does not state how this will be accomplished and it ignores the need to maintain genetic diversity supported by the current connectivity between populations in separate drains. In fact, the DHCP relies on the future development and implementation of a plan to preserve pupfish connectivity by the DHCP Implementation Team, which has yet to be convened. Other promises made by IID within the DHCP include the creation and maintenance of pupfish habitat, the construction of a pupfish refugium pond, and a study of how routine channel maintenance affects in-channel pupfish populations. The details of how all these complex tasks will be accomplished have yet to be determined, and the DHCP assigns these tasks in part to the HCP Implementation Team. (3-27).

It must be noted that IID proposes to man the HCP Implementation Team with representatives from the California Game and Fish Department and the U.S. Fish and Wildlife Department, agencies that are already overburdened and financially strained and over which IID has no jurisdiction. The anticipated tasks of the HCP Implementation Team are extensive, going far beyond the design of pupfish mitigation measures; the DHCP implicates the Implementation Team in almost every future task that involves habitat modification or restoration. The DHCP does not detail how the Implementation Team will be funded or if its recommendations will have any authority that extends beyond its role as an advisory panel to IID.

Salton Sea Water Quantity

The DEIR/EIS employs a baseline that is not an expression of current conditions at the Salton Sea, but rather is based upon a hydrologic model that predicts dramatic decreases in the elevation and quality of water in the Salton Sea that are out of synch with

Response to Comment T1-13

Each of the various Salton Sea mitigation approaches considered in the HCP, including the Pacific Institute and Tri-Delta proposals, contained a high level of uncertainty regarding the ultimate outcome; therefore, they were removed from further consideration. Upon further review with USFWS and CDFG, and in consideration of comments on the Draft EIR/EIS, HCP Approach 1 also was removed from consideration. Please refer to the Master Responses on *Biology—Approach to Salton Sea Habitat Conservation Strategy* and *Hydrology—Development of the Baseline* in Section 9 of this Final EIR/EIS.

Response to Comment T1-14

The Salton Sea Habitat Conservation Strategy includes specific measures that are intended to adequately minimize and mitigate the impact of the take of any pupfish as a result of IID's covered activities. These measures include provisions to ensure connectivity among drains when salinity in the Salton Sea effectively precludes the ability of pupfish to use the Sea as a migration conduit. This measure outlines a strategy for mitigating impacts that would occur, if at all, about 70 years into the future. The measure clearly defines the intent and objective of the action (see measure Salton Sea-2 in the HCP, Appendix C of this Final EIR/EIS) and outlines possible approaches to constructing these connections. Although development of the construction details would be deferred, sufficient information is provided to give the HCP Implementation Team clear guidance on the intent of the measure, and to give the public and decisionmakers an understanding of the potential impacts. Similarly, the elements of the other measures intended to mitigate the impact of take of pupfish and to contribute to recovery contain sufficient information to clearly understand the commitment and obligations of IID and the potential impacts of implementing these measures. Some of the details of these measures will be developed by the HCP Implementation Team as part of the adaptive management program. Since release of the Draft EIR/EIS and HCP, IID has reviewed each of the elements of the pupfish conservation strategy with USFWS and CDFG, and has revised the HCP to address outstanding concerns. In addition, the adaptive management approach for desert pupfish in the HCP was revised to provide greater clarity. See Appendix C of the Final EIR/EIS for the revised version of the HCP.

Response to Comment T1-15

The roles and responsibilities of the Habitat Conservation Plan Implementation Team have been more clearly defined in Chapters 3, 4 and 5 of the HCP. The HCP IT will serve in an advisory capacity, providing recommendations and guidance in implementing the HCP. Compliance with the HCP measures will remain the sole responsibility of IID. Furthermore, while the HCP Implementation Team can make recommendations on various management actions, the USFWS and CDFG retain approval authority over various aspects of the HCP as identified in the Chapters 3, 4, and 5 of the revised HCP (see Appendix C of the Final EIR/EIS).

Response to Comment T1-16

Please refer to the Master Response on *Hydrology—Development of the Baseline* in Section 9 of this Final EIR/EIS.

those observed in recent history. While the action agencies are clearly aware of the historic and existing conditions of the Salton Sea, they choose to utilize a faulty predictive model for the environmental baseline, in violation of both the California Environmental Quality Act and the National Environmental Policy Act. (§§3.1.3, 3.2.3).

The model utilized by the DEIR/EIS and DHCP is selective in the elements that it embraces and those that it excludes. The extrapolative baseline focuses on elements that exaggerate the potential for decline in the elevation of the Salton Sea and the increase of the contamination of the Sea's water sources, but fails to consider potential activities that could benefit the Sea, such as the variety of activities proposed for Salton Sea restoration. By presenting a picture of a doomed Salton Sea, the DEIR/EIS establishes a fallacious baseline that eases the burden of mitigating the environmental consequences of the Project.

The most obvious error incorporated into the baseline model is the prediction that IID will not be able to continue to use water at or above its historic level of use. IID's recent usage has been 2.93 million acre-feet per year. The Quantification Settlement Agreement will allow IID to use up to 3.1 million acre-feet per year. This means that IID has the leeway to transfer 170,000 acre-feet per year before even beginning to conserve water. Therefore, IID will be able to provide more than half of the "conservation water" contemplated by the various water transfer agreements before any effects would be felt at the Salton Sea due to a reduction in IID's use and the accompanying inflows to the Sea. Overall, the implication is that the quantity and quality of the Salton Sea will continue to decline at an exceedingly rapid rate without implementation of the Project. This unsubstantiated implication eases the burden of the action agencies improperly, and creates an unacceptable excuse for the United States to ignore impacts to Tribal trust assets.

The DEIR/EIS also predicts that without implementation of the Project, the level of the Salton Sea will drop from its current elevation of -228' to -235'. The DEIR/EIS then proceeds to rely upon the -235' elevation as the baseline for environmental impact analysis. This is done despite the fact that the Salton Sea level has remained reasonably steady at -227' over the last ten years. By adopting the -235' elevation for the baseline analysis, the DEIR/EIS and DHCP avoid the need for the action agencies to mitigate the environmental impacts of the interim drop of 7 feet in the elevation of the Salton Sea.

Salton Sea Water Quality

The erroneous use of predictive models for an environmental baseline is described in the DEIR/EIS itself. (3.1-92, 3.1-93). Prediction of increasing salinity, pesticide and herbicide levels through the life of the Project are utilized for the DEIR/EIS baseline, rather than existing conditions. For example, the baseline salinity level of 879 mg/L at Imperial Dam is considerably higher than the 771 mg/L average of salinity levels at Imperial Dam between 1987 and 1999. This predicted increase in salinity levels is adopted without regard for salinity control efforts such as those proposed by the Salton Sea Restoration Project or currently being implemented by the Colorado River Basin Salinity Control Program. The discussion of the levels of dissolved solids in the Salton

Response to Comment T1-17

Please refer to the Master Response on *Hydrology—Development of the Baseline* in Section 9 of this Final EIR/EIS.

Response to Comment T1-18

Please refer to the Master Responses on *Hydrology—Development of the Baseline* and *Biology—Approach to Salton Sea Habitat Conservation Strategy* in Section 9 of this Final EIR/EIS. In addition, the following detailed information is offered:

A draft paper titled "EFFECT OF SALT PRECIPITATION ON HISTORICAL AND PROJECTED SALINITIES OF THE SALTON SEA: SUMMARY COMMENTS FROM WORKSHOP AT UC (RIVERSIDE)" (2001) summarizes joint expert opinions relative to salt precipitation and/or biologic reduction within the Salton Sea. This paper is the basis for the 0.7 to 1.2 million tons per year adjustments to salinity within the Salton Sea Accounting Model. The workshop participants and panel experts made no conclusions relative to future increases in parameters such as the salinity of the Salton Sea. In addition, there are no other known scientific investigations pertinent to this issue. As a result, there is no available scientific basis for precipitation increase and/or reduction as salinity rises in the future within the Salton Sea Accounting Model.

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T1-18 Sea Accounting Model utilized for the DEIR/EIS acknowledges that there is a wide range in the potential amount of salt precipitation and biological reduction of sulfates in the Sea. Nonetheless, the DEIR/EIS and the DHCP do not attempt to incorporate these future reductions in salinity, instead adopting a dramatic prediction that salinity levels will reach 60 g/L by 2023. (3.0-16).

T1-19 Another critical element that is omitted from the predictive baseline is the foreseeable change in water quality standards. The EPA has informed the action agencies that it anticipates revision of the selenium aquatic life criteria to a level of 2ug/L. (EPA Comments on the QSA DPEIR, April 16, 2002, p. 3). This is vital information to include in any predictions of environmental impacts as the selenium levels at the New River and Alamo River outlets to the Salton Sea already exceed the current standard of 5ug/L (3.1-56). Also ignored is the ongoing development of beneficial use criteria, water quality standards and TMDLs by the Tribe and other members of the Coachella Valley Tribal Consortium.

T1-20 Also omitted from DEIR/EIS analysis is any potential for mitigation of excessive selenium levels. The DEIR/EIS claims that selenium levels cannot be mitigated (3.1-11), completely ignoring any potential utilization of anaerobic, microalgal, or chemical selenium removal, or potential methods of alternative drainage management. It also ignores the potential impacts of the DHCP's mitigation approach 2, to utilize conserved water to maintain Salton Sea levels, which could also be used to dilute flows in the New River and Alamo River.

T1-21 Finally, the predictions of contaminant levels in the Salton Sea are meaningless without a firm decision of how water is to be conserved within IID. Without that information no reasonable analysis can be made of the DEIR/EIS or the DHCP, rendering them invalid decision-making tools. The degree to which on-farm and conveyance system efficiencies and fallowing are used to conserve water will vary the level of salts, selenium and other contaminants in the water that eventually reach the Salton Sea and the Reservation. In addition, where different types of conservation water are transferred will also affect the level and type of contaminants that impact the Salton Sea. The DHCP itself recognizes the inherent impossibility of accurately predicting the salinity levels of the Salton Sea based on the operational parameters developed to date. (3-7, 3-8).

Rather than coming to the honest conclusion that reasonable contaminant levels can not be accurately ascertained, the DHCP draws the unsubstantiated and speculative conclusion that, "the differences between the salinity projections with implementation of the water conservation and transfer programs and the baseline would not be expected to change substantially." (3-8). This incredible inference that salinity levels will not substantially differ with or without the implementation of the Project is used to support an number of biologic conclusions, creating a domino effect of unreliability within the analysis of the DHCP and the DEIR/EIS.

Response to Comment T1-19

Please refer to the Master Response on *Hydrology—Selenium Mitigation* in Section 9 of this Final EIR/EIS.

Response to Comment T1-20

Please refer to the Master Response on *Hydrology—Selenium Mitigation* in Section 9 of this Final EIR/EIS.

Response to Comment T1-21

As noted by the commenter, the salinity trajectory of the Salton Sea will be influenced by how water conservation is achieved. The EIR/EIS and HCP present and encompass the range of salinization rates that could occur at various levels of conservation and through various methods of conservation. The Salton Sea Habitat Conservation Strategy is designed to address the worst case but is flexible enough to be applicable to the range of conservation levels and methods that could be employed. The presentation of salinity projections for the Salton Sea and associated discussion contained in Section 3.3.2.1 of the HCP also has been revised to include confidence intervals of salinity levels to show the range of potential impacts (see Appendix C in this Final EIR/EIS).

The commenter appears to have misinterpreted the statement "the difference between the salinity projections with implementation of the water conservation and transfer programs and the baseline would not be expected to change substantially." This statement is not intended to mean that there is no difference in the salinity projections under the Baseline and the Proposed Project. Rather, it indicates that while there is a difference in the salinity trajectories of the baseline and the Proposed Project, the magnitude of the difference would stay the same in consideration of other factors because other factors would act equally on the Baseline and the Proposed Project.

Fish and Wildlife Resources

The DEIR/EIS and DHCP fail to adequately consider the impacts from the accelerated lowering of the Salton Sea and accompanied increase in contaminant levels to the over 400 bird species, 27 mammal species, and five reptile and amphibian species that rely on the Salton Sea. These fish and wildlife populations include 58 species classified by the U.S. federal government as sensitive. Most significantly 25 to 40% of the Yuma clapper rail U.S. population, half of the California population of snowy plover, 80 to 90% of the entire population of American white pelicans, and the second largest population of wintering white-faced ibis utilize the Salton Sea.

The discussions of impacts to the Salton Sea inadequately describe the massive die-off events of both fish and birds that will be caused by the accelerated eutrophication of the Sea caused by the Project. More significantly, the DEIR/EIS disposes of the need to mitigate the predictable extirpation of all fish in the Salton Sea by claiming that all fish in the Sea are introduced, non-natives. (3.2-150). This approach is flawed in two aspects. First, the fish that currently exist in the Salton Sea attract more than 400,000 fishermen every year, injecting millions of dollars into the local, low-income economies. The DEIR/EIS itself estimates the economic impact of the Project to be \$790 million. (3.14-24). Therefore, the destruction of the Salton Sea's fisheries will create significant economic and social justice effects. Second, the Salton Sea supports the native endangered desert pupfish. The Tribal concerns regarding the suspect mitigation plans for the desert pupfish, discussed above, are only heightened by the claim that the loss of the Salton Sea fisheries is less than significant. (3.2-150). Additionally, there is no discussion of mitigation for the odor and airborne disease impacts that will accompany the die-off of the Salton Sea's fisheries.

The DHCP touches upon the impacts to bird habitat, such as the loss of shoreline habitat and the exposure of land bridges to island rookeries, but fails to adequately provide mitigation strategies for these impacts. For example, there is no meaningful discussion of the impacts that will be felt by the thousands of shorebirds that rely on the Salton Sea as existing shoreline habitat is destroyed by recession of the waterline and the quality and slope of the shoreline becomes altered. Moreover, there is no mitigation strategy presented for the needs of shoreline birds, as the small fishponds will not be able to mimic required shoreline conditions.

Given the above-described inadequacies of the DEIR/EIS and DHCP, the Tribe clearly cannot concur with the conclusion that there will be no significant impacts to biological resources after mitigation. (ES-1).

Air Quality

The DEIR/EIS and HCP fail to recognize the Project's likely air quality impacts and do not provide adequate mitigation options. The air quality at the Salton Sea already exceeds both national and state ambient air quality standards. (3.7-6). Therefore the finding of the DEIR/EIS that the air quality impacts predicted to arise from exposure of up to 78 square miles of shoreline would be a significant impact is correct. However, the DEIR/EIS is incorrect in asserting that this will be an unavoidable impact. First, this

Response to Comment T1-22

The HCP has been revised to include more detailed evaluations of the impact of the Proposed Project and the effects of the mitigation on special-status species. The EIR/EIS references the species-specific evaluations contained in the HCP where appropriate.

The evaluation of impacts to biological resources of the Salton Sea is based on assessing changes in the values provided by the Sea and subsequently how groups of species using these values could be affected. For example, shorebirds are addressed in the evaluation of changes in invertebrate resources of the Salton Sea and changes in the extent of mudflat and shallow water habitat. An evaluation of the effects of the Proposed Project on each species individually is not necessary to disclose the nature and magnitude of the Project's impacts on biological resources or to determine their significance.

Response to Comment T1-23

Please refer to the Master Response on *Biology—Approach to the Salton Sea Habitat Conservation Strategy* in Section 9 of this Final EIR/EIS.

Response to Comment T1-24

The approach to addressing potential impacts to piscivorous birds at the Salton Sea was revised (see Master Response on *Biology—Salton Sea Habitat Conservation Strategy* in Section 9 of this Final EIR/EIS). Under the revised approach, IID would offset reductions in inflow to the Sea resulting from water transfer by supplying water to the Sea. This approach would result in the maintenance or reduction in salinity relative to the Baseline until the year 2030 and provide an overall benefit to the sport fish in the Sea. Also, see response to Comment T1-14.

Response to Comment T1-25

As stated in the Draft EIR/EIS, odors in the Salton Sea are most likely primarily associated with the effects of eutrophication. Eutrophication occurs as a result of nutrient inflows from agricultural drainage. In this process, algae production is limited by the availability of phosphorus. When the algae respire, dissolved oxygen is consumed from the Sea. Dissolved oxygen deficits are thought to be responsible for fish die-offs

Response to Comment T1-25 (continued)

which contribute to odor problems at the Salton Sea. Decomposition and sulfate reduction processes are also likely contributors to odors. TMDLs for phosphates in the New and Alamo Rivers are expected to be proposed to reduce loading of phosphates in the Salton Sea. Implementation of these TMDLs could be expected to result in reduced odor occurrences. See Master Response on *Hydrology—TMDLs* in Section 9 of this Final EIR/EIS.

With the Proposed Project, implementation of the Salton Sea Habitat Conservation Strategy will maintain Baseline inflows into the Sea until about 2035. Depending on the source water used for mitigation water, the loading of phosphates could remain the same as the Baseline or be improved. After 2030, when IID's obligation to maintain salinity levels in the Salton Sea at Baseline conditions ceases, inflows to the Salton Sea will fall below Baseline levels. At that point, unless a Restoration Project has been successfully implemented, it is expected that the fishery will have ceased to reproduce and will no longer exist. Thus odors from fish die-offs will not be a factor. Also, after 2035, inflows to the Sea will be reduced, also reducing the loading of phosphorus into the Salton Sea. Although the Sea will be decreasing in size at the same the time flows are reduced, the effects of the implementation of the TMDLs could result in an improved condition in terms of the loading of TMDLs in relationship to the amount of water in the Sea.

Given the complexity of the interrelationship of phosphate inputs, water quantity and water quality, it is not possible to quantify a change in odor that could be expected from implementation of the Project. However, compared to the existing condition and projected ongoing eutrophication conditions at the Salton Sea, the effects of the Proposed Project on odors is expected to be less than significant, as stated in the Draft EIR/EIS.

Response to Comment T1-26

The HCP only addresses impacts to the 96 species that are proposed for coverage in the incidental take permits. Impacts from changes in shoreline habitat and creation of land bridges are evaluated for covered species, and appropriate mitigation is included in the Habitat Conservation Strategies. Impacts of the Proposed Project on species of shorebirds and colonial nesting birds that are not covered species in the HCP are addressed in Impacts BR-49 and BR-48, respectively, in the Draft EIR/EIS (Section 3.2).

Response to Comment T1-27

Please refer to the Master Response on *Air Quality—Salton Sea Air Quality Monitoring and Mitigation Plan* in Section 9 of this Final EIR/EIS.

T1-27 assumes that the second mitigation approach in the DHCP of maintaining Salton Sea elevations with conserved water will not be pursued, enhancing the appearance that the DHCP analysis is unreliable. (3.7-36). Second, this analysis fails to consider mitigation strategies such as planting of vegetative groundcover or the use of shallow flooding.

T1-28 The quantity of air quality impacts is not approximated by the DEIR/EIS, apparently because the soils have not yet been exposed. (3.7-34). The DEIR/EIS relies on the assumption that a saline crust covering would form over newly exposed lands, minimizing fugitive air emissions. However, the massive air emissions experienced at the Owens dry lakebed undermines this hypothesis. The DEIR/EIS provides some discussion that attempts to distinguish the Salton Sea scenario from the Owens lake experience, however this discussion is speculative at best and is not founded on any study of the potential durability or sustainability of crust formation at the Salton Sea. The DEIR/EIS concludes that the crust would not be disturbed by human activity, such as agricultural or other activities that the DEIR/EIS suggests the Tribe might engage in, such as development of newly exposed resources. This internal inconsistency brings into question both the finding of no significant impact to Tribal assets and the analysis of fugitive air emissions. Given the reliance of the DEIR/EIS on assumptions about the quality and characteristics of the sediments to be exposed by the Project, it is imperative that meaningful data is collected, studied and evaluated, and reliable conclusions are issued regarding both the potential for fugitive air emissions and the potential that the exposed land may be used for any specific use before the EIR/EIS is finalized and approved.

T1-29 Environmental Justice

The DEIR/EIS and DHCP currently violate Executive Order 12898 due to a complete lack of analysis of the disproportionate impacts to low income and minority populations, such as the Tribe. As discussed above, the DEIR/EIS and DHCP do not consider the tremendous environmental, economic and cultural harm the impact of the massive fish and wildlife die-offs will have on the Tribe. The Tribe has deep cultural, religious, and natural resource management connection with the Salton Sea, its shoreline and attendant habitat and with the creatures that utilize those areas. The Tribe would be severely impacted by their demise.

T1-30 Distributive Justice

The DEIR/EIS and DHCP also violate Joint Secretarial Order No. 3206. That Order was implemented to ensure that the Departments of Interior and Commerce carry out their duties, "in a manner that...strives to ensure that Indian tribes do not bear a disproportionate burden for the conservation of listed species." (S.O. 3206, §1). The principle underlying Secretarial Order 3206, often referred to as distributive justice, sets forth the concept that those who benefit from the actions that jeopardize the survival of species should be the ones held responsible for implementing conservation measures to ensure their survival.

In their current state, the DEIR/EIS and the DHCP present the potential to encourage federally listed species to seek refuge from the Project's environmental consequences on

Response to Comment T1-28

Please refer to the Master Response on *Air Quality—Salton Sea Air Quality Monitoring and Mitigation Plan* in Section 9 of this Final EIR/EIS.

Response to Comment T1-29

Please refer to the Master Response on *Biology-Approach to Salton Sea Habitat Conservation Strategy* in Section 9 in this Final EIR/EIS. In addition, the previous Draft EIR/EIS has been revised to address this and other comments on Environmental Justice and ITAs. These changes are indicated in Sections 3.15 and 3.8 of this Final EIR/EIS.

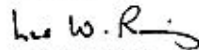
Response to Comment T1-30

Impacts to habitats and associated wildlife species in the Imperial Valley would be mitigated under the HCP through creation of additional habitat or protection of existing habitat. This additional habitat creation and protection would serve to offset any habitat losses in the Imperial Valley that occur as a result of the covered activities, including water conservation and transfer. For example, under the Drain Habitat Conservation Strategy, an acreage of managed marsh equivalent to the total acreage of existing vegetation in the drains would be created. Because no substantial changes in the extent of vegetation in the drains is expected, the Drain Habitat Conservation Strategy is expected to increase the amount of habitat in the Imperial Valley for species associated with drain habitat. As the HCP would compensate for lost habitat value for habitats in the Imperial Valley, the occurrence of special-status species on the Reservation would not be expected to change.

the Torres-Martinez Indian Reservation. Moreover, the significant impacts to the water quality and quantity of the Salton Sea, described above, increase the likelihood that the survival of additional species, which currently occupy the Reservation or may be pushed onto the Reservation by the Project's impacts, will become jeopardized. The foreseeable need to propose and list additional species due to the environmental consequences of the Project is contrary to the Secretarial Order's mandate that agencies of the Departments of Interior and Agriculture take affirmative steps to promote healthy ecosystems and Indian self-government. (S.O. 3206, §3). Rather, the DEIR/EIS and DHCP present the real possibility that Tribal self-government will be hampered by the increased presence of proposed, candidate and listed species on the Reservation and the associated conservation burdens, and that the Tribe may become, by default, liable for the consequences of Project.

Thank you for considering these comments. Please do not hesitate to contact me to discuss these issues in greater detail.

Sincerely,



Les W. Ramirez
Special Counsel for Water Resources &
Environmental Affairs



COLORADO RIVER INDIAN TRIBES
OFFICE OF THE ATTORNEY GENERAL

April 26, 2002

VIA FACSIMILE



Mr. Bruce D. Ellis
Bureau of Reclamation
Phoenix Area Office
P.O. Box 81169
Phoenix, AZ 85069

Mr. Elliston Grubaugh
Manager of Resources, Management,
and Planning Department
Imperial Irrigation District
P.O. Box 937
Imperial, CA 92251

Re: Comments on Draft EIR/EIS for the Imperial Irrigation District Water Conservation Plan and Transfer Project and Draft Habitat Conservation Plan

Dear Mr. Ellis and Mr. Grubaugh:

The Colorado River Indian Tribes (CRIT) hereby submit the following comments on the Draft EIR/EIS for the Imperial Irrigation District Water Conservation Plan and Transfer Project and Draft Habitat Conservation Plan. CRIT's comments focus the impacts of the proposed transfer on the reservation environment and power production at Headgate Rock Dam.

Environmental Impacts

If the proposed transfer is implemented, annual stream flows through the CRIR will be reduced by as many as 388,000 acre-feet. As the Draft EIR/EIS states, the proposed transfer will impact CRIT's biological resources within the riparian corridor. (Chapter 3.2). This area includes the Ahakhav Tribal Preserve and several of CRIT's proposed restoration areas. The projected impacts to the riparian corridor include reduction in the area of open water and emergent vegetation, drops in groundwater levels, and potential impacts on riparian vegetation. (Chapter 3.2). These findings were based upon the Biological Assessment (BA) prepared by the BOR and referred to throughout the Lower Colorado River (LCR) analysis of the Draft EIR/EIS.

While CRIT agrees that the transfer will impact biological resources in the riparian corridor, CRIT does not believe the magnitude of these impacts has been fully identified, quantified and

**Letter - T2. Colorado River Indian Tribes Office of the
Attorney General. Signatory - Eric N. Shepard.**

evaluated. Specifically, CRIT is concerned about the scope of the Draft EIR/EIS and the impacts of the transfer on groundwater.

CRIT strongly believes that the Draft EIR/EIS should model the combined effect of the transfer and the maximum projected effects of the Inadvertent Overrun and Payback Policy (IOP). The IOP includes a schedule for paybacks of inadvertent overruns to the River. The maximum payback amount in a given year is 176,000 af under the dEIS prepared by the BOR. When the historic pattern of water use by California is considered, we believe that it is highly likely that inadvertent overruns will occur. Therefore, the biological impacts of the proposed transfer have not yet been completely modeled.

In addition, the analysis of biological impacts in the Draft EIR/EIS is based on an average reduction of surface water elevation of up to 4.48 inches (p. 3.2-104). The use of an average to project biological impacts is problematic, as it does not address the specific issues of amount, duration, frequency, and timing of extreme low-flow conditions. The final EIS should contain an analysis of daily flows, water surface elevations, and elevation-duration-frequency analyses for the areas between Parker and Imperial Dams.

Furthermore, current groundwater conditions should be accurately mapped in order to adequately assess the impact of the transfer and IOP on groundwater. Groundwater elevations are expected to drop a maximum of 4.4 inches (p. 3.9-18). Cottonwood and willow trees as well as marsh vegetation are more susceptible than other riparian plants (p. 3.9-18). More information is needed in order to more accurately assess the biological impacts of a drop in groundwater elevation. For example, accurate groundwater maps and data regarding changes in groundwater elevation will allow for more specific projections of the acreage and location of impacted cottonwood/willow land cover. If a baseline of groundwater elevations is established it could then be correlated with existing cottonwood/willow habitat and also proposed mitigation sites. Correlations between stand condition and depth to groundwater could also be established. Cottonwood/willow habitat is sensitive to groundwater changes and would be useful as an indicator of the biological impacts of the transfer and IOP. Monitoring of cottonwood/willow habitat could be incorporated into a comprehensive research and monitoring program. Such a program would enable mitigation to be more effectively planned and implemented.

Several cottonwood/willow restoration projects have been established on CRIT land. Average depth to water table on sites restored to cottonwood/willow vegetation has ranged from 1.97 to 5.4 ft. Optimum depth to water table for cottonwood/willow stand maintenance is 4 ft. with 9 ft. being considered to be deep for successful establishment (BA page 46). A reduction in groundwater elevation has the potential to cause mortality of established cottonwoods and willows (p. 3.2-107). Drops in groundwater levels would also reduce restoration projects' suitability as habitat for endangered southwestern willow flycatcher (*Empidonax trailii eximius*).

While the Draft EIR/EIS discusses habitat conservation and mitigation, however the document does not specify the criteria for the selection of mitigation sites. CRIT believes it is important that impacted cottonwood/willow or other sensitive habitat on the CRIR be offset by mitigation on the Reservation. CRIT has invested considerable time and resources in its existing restoration projects and would be interested in hosting mitigation projects for impacted habitat off the Reservation. There are several suitable areas potentially available as mitigation sites on the CRIR.

A plan for the long-term monitoring of the impacts of the transfer and related federal actions is needed. The Colorado River is a complex and unpredictable system. This makes it extremely

Response to Comment T2-1

As described in Section 3.1.2 of the IA EIS, which is incorporated into this EIR/EIS by reference, different but interrelated modeling efforts and impact analyses were necessary to estimate changes from the IA and IOP due to the fundamental nature of each component of the Proposed Project. For example, the IA is in effect at all times, while the IOP represents variable year-to-year changes. We analyzed the cumulative effects by "layering" the effect of the IOP (assuming either the average or "worse case" impacts) onto impacts of the IA. We believe that this method is appropriately used in the assessment of the relative differences between Baseline and Proposed Project conditions.

Response to Comment T2-2

Reclamation completed two analyses to determine the biological impacts of the Proposed Project. The first analysis was used to determine the impacts to groundwater and Southwestern willow flycatcher habitat impacts. This analysis assumed the average daily flow releases from Parker Dam (with and without the Proposed Project) were routed downstream to various points along the Colorado River. The downstream water surface elevations were determined from the attenuated average daily flow. The change in water surface elevation, at a particular site downstream of Parker Dam, was determined from the difference of the water surface elevations with and without the water transfers. Using the amount of reduced water surface elevation, groundwater changes were predicted adjacent to the river. Using the changed groundwater maps, potential acreages of impacted Southwestern willow flycatcher was determined.

The second analysis was used to determine the impacts to the open water in the main channel, and open water in backwaters that are connected to the main channel. In this analysis, the daily minimum flows from Parker Dam were routed downstream to various points along the Colorado River. The downstream water surface elevations were determined from the attenuated minimum daily flow. The change in water surface elevation, at a particular site downstream of Parker Dam, was determined from the difference of the water surface elevations with and without the water transfers. Using the amount of reduced water surface elevations, groundwater changes were predicted adjacent to the river. Using the changed groundwater maps, potential acreages of impacted open water and emergent vegetation were determined.